bintec elmeg
Teldat Group Company

IP ACCESS ROUTER

Universal VPN-router with VDSL2 and ADSL2+

bintec RS353a

- VDSL2/ ADSL2+ Modem (Annex A)
- Vectoring ready
- 5x IPSec tunnels, HW acceleration
- Web based configuration
- Prepared for IPv6
- Flexible mounting: Desktop or 19" Rack
- Stateful Inspection Firewall

bintec RS353a

Universal VPN-router with VDSL2 and ADSL2+

The bintec RS353a with its combined VDSL/ADSL2+ Modem (Annex A) is ideal for use in home offices and at small branch locations.

Product description

The bintec RS353a is a powerful professional VPN router for high-speed internet access. With its combination VDSL2 and ADSL 2+ modem, this model gives small and mid-sized companies the foundation they need to establish state-of-the-art, robust internet connectivity.

The RS353a delivers advanced security, flexibility, and exceptional performance across a wide range of applications. The combination VDSL2 and ADSL2+ modem supports the Annex A standard (ADSL over POTS) according to ITU standard G992.1.

This router boasts a fan-less metal housing, offers long-term reliability for business-critical applications, and makes an ideal access router for small and mid-sized enterprises (SMEs), branch locations, and home offices.

Thanks to the included 19-inch rackmount conversion bracket, customers can easily integrate this model into 19-inch server racks or operate it on the desktop. Rack mounting is further simplified by the device height of exactly one rack unit and the integrated power supply.

In addition to the VDSL2 /ADSL2+ modem, the bintec RS353a also provides five Gigabit Ethernet ports which can be independently configured for use in a LAN, WAN, or DMZ. The included five licenses for hardware-accelerated IPSec tunnels provide comprehensive high-speed VPN functionality and allow for secure connections to branch locations and off-site employees. An LTE(4G) or UMTS(3G) USB modem (stick) connected to the USB port can be used as a remote configuration access and as a backup interface.

With its wide range of WAN connectivity options, the RS353a raises the bar for flexibility among access routers.

Smart design

The fan-free metal housing is a proven, rugged design that has set bintec devices apart from the competition for years. The integrated power supply and 19" conversion bracket now also make it easy to install in a 19" rack.

Maximum performance

The bintec RS353a is based on a powerful platform with unrivaled capabilities. Customers with VDSL2 connections can double their data transfer rates by taking advantage of VDSL vectoring technology. High speed interfaces handle heavy local network traffic with ease. You can even establish links between separate company locations over secure, encrypted VPN tunnels.

Airtight security

The bintec RS353a not only delivers outstanding performance, it also provides a comprehensive range of security features. With five simultaneous IPSec channels available, you can establish secure links between branch locations, subsidiaries, and home offices. The integrated IPSec implementation in bintec routers allows the use of pre-shared keys as well as digital certificates as recommended by Germany's Federal Office for Information Security. This lets you use a public key infrastructure and ensures maximum security. An object-oriented stateful inspection firewall offers packet filtering to provide additional protection against attacks.

Professional management

A graphical user interface is the primary means of configuring the router. This fast, web-based interface makes it easy to set up routers using the integrated configuration wizard. Administrators can also manage the devices locally or remotely using configurable telnet, SSH, or GSM dial-in. The bintec DIME Manager is a free software tool that allows administrators to manage up to 50 devices at once.

Ready for the future

Businesses can easily integrate the RS353a into existing company networks. This bintec router also allows for a gradual migration to the new IPv6 internet protocol. The integrated VDSL2 modem of the bintec RS353a supports VDSL bandplan 998 including profiles 8b, 17a, and 30a, the standards used in Germany and most other European countries. The modem also supports automatic failover to ADSL2+. With easy migration from ADSL2+ to VDSL2 and support for VDSL vectoring, the professional-grade bintec RS353a router is a sound investment in your organization's future.

WLAN Controller, HotSpot and adult content filtering

The router also includes all the functionality of the bintec WLAN Controller. The bintec WLAN controller lets you configure and monitor small- and mid-sized WLAN networks with up to 12 access points. No matter whether you need frequency management with automatic channel selection, loadbalancing across several access points, support for virtual LANs, or virtual wireless network administration (multi-SSID) - you have all these advanced features at your fingertips with the WLAN Controller. The software continually monitors the entire wireless network, notifying administrators of any malfunctions or security threats.

The router's integrated HotSpot Gateway together is an ideal complement to the WLAN Controller in combination with a bintec HotSpot license, allowing operators to set up a wireless guest network that requires authentication. This secure separation between the guest network and company network is configured through the WLAN Controller and implemented using virtual wireless networks. An additional highlight is the optional Cobion filter which can be used to prevent children and youth from accessing inappropriate content.

Variants

bintec RS353a-UK (5510000364)	IP Access Router; Desktop device option. 19"Rack; incl. VDSL2/ADSL modem (Annex A, POTS); incl. IPSec (5 tunnels), certificates, HW encryption; 4+1 Gbit Eth. switch; USB (Typ B); USB port; no use with DeutscheTelekom equipment; UK Version
bintec RS353a (5510000343)	IP Access Router; Desktop device option. 19"Rack; incl. VDSL2/ADSL modem (Annex A, POTS); incl. IPSec (5 tunnels), certificates, HW encryption; 4+1 Gbit Eth. switch; USB (Typ B); USB port; no use with DeutscheTelekom equipment; german and intern.version

Features

DSL	
VDSL Vectoring	Vectoring ready by ITU-T G.993.5
VDSL	Backward compatible to ADSL/ADSL2/ADSL2+ over POTS, Annex A
ADSL 2 / ADSL 2+	ADSL over POTS (ITU G.992.1, ITU G.922.2, ITU G.992.3, ITU G.992.5 Annex A)
VDSL	VDSL2 ITU G.993.2
VDSL Profile	VDSL Profile 8a, 8b, 8c, 8d, 12a, 12b, 17a, 30a
ADSL	Support of Dying Gasp
ATM	Support of layer 1 protocol AAL5, PVCs, RFC 1483
ATM	Support of up to 7 virtual channels (VC)
ATM	Support of OAM F4/F5 line monitoring
ATM	Support of ATM traffic management (COS - CBR, VBR, UBR)

Routing	
Multicast inside IPSec tunnel	Enables the transmission of multicast packets via an IPSec tunnel
Policy based Routing	Extended routing (Policy Based Routing) depending of diffent criteria like IP protocols (Layer4), source/destination IP address, source/destination port, TOS/DSCP, source/destination interface and destination interface status
Multicast IGMP	Support of Internet Group Management Protocol (IGMP v1, v2, v3) for the simultaneous distribution of IP packets to several stations
RIP	Support of RIPv1 and RIPv2, separated configurable for each interface
Multicast IGMP Proxy	For easy forwarding of multicast packets via dedicated interfaces
Extended RIP	Triggerd RIP updates according RFC 2091 and 2453, Poisened Rerverse for a better distribution of the routes; furthermore the possibility to define RIP filters for each interface.

Protocols / Encapsulations	
IPoA	Enables the easy routing of IP via ATM
DNS Forwarding	Enables the forwarding of DNS requests of free configurable domains to assigned DNS server.

Protocols / Encapsulations

PPPoE (Server/Client)	Point-to-Point Protocol over Ethernet (Client and Server) for establisching of PPP connections via Ethernet/DSL (RFC 2516)
Packet size controling	Adaption of PMTU or automatic packet size controling via fragmentation
PPPoA	Point to Point Protocol over ATM for establishing of PPP connections via ATM/DSL
DYN DNS	Enables the registering of dynamic assigned IP addresses at adynamic DNS provider, e.g. for establishing of VPN connections
MLPPPoE (Server/Client)	Multilink extension MLPPPoE for bundeling several PPPoE connections (only if both sides support MLPPPoE)
DHCP	DHCP Client, Server, Proxy and Relay for siplified TCP/IP configuration
PPP/MLPPP	Support of Point to Point Protocol (PPP) for establishing of standard PPP connections, inclusive the Multilink extension MLPPP for the bundeling of several connections
DNS	DNS client, DNS server, DNS relay and DNS proxy

Quality of Service (QoS)

Bandwidth reservation	Dynamic reservation of bandwidth, allocation of guaranteed and maximum bandwidths
TCP Download Rate Control	For reservation of bandwidth for VoIP connections
Layer2/3 tagging	Conversion of 802.1p layer 2 priorisation information to layer 3 diffserv attributes
DiffServ	Priority Queuing of packets on the basis of the DiffServ/TOS field
Policy based Traffic Shapping	Dynamic bandwidth management via IP traffic shaping

Redundancy / Loadbalancing

VPN backup	Simple VPN backup via different media. Additional enables the bintec elmeg interface based VPN concept the application of routing protocols for VPN connections.
Load Balancing	Static and dynamic load balancing to several WAN connections on IP layer
BRRP	Optional: Bintec Router Redundancy Protocol for backup of several passive or active devices with free selectable priority
BoD	Bandwidth on Demand: dynamic bandwidth to suit data traffic load

Layer 2 Functionality

Bridging	Support of layer 2 bridging with the possibility of separation of network segment via the configuration of bridge groups
Proxy ARP	Enables the router to answer ARP requests for hosts, which are accessible via the router. That enables the remote clients to use an IP address from the local net.
VLAN	Support of up to 256 VLAN (Virtual LAN) for segmentation of the network in independent virtual segments (workgroups)

Interfaces

VDSL2/ ADSL 2+/ ADSL	xDSL over POTS
Ethernet	5 x 10/100/1000 Mbps Ethernet Twisted Pair, autosensing, Auto MDI/MDI-X, up to 4 ports can be switches as additional WAN ports incl. load balancing, all Ethernet ports can be configured as LAN or WAN.
USB 2.0 host	USB 2.0 full speed host port for connecting LTE(4G) or UMTS(3G) USB sticks (supported sticks: see www.bintec-elmeg.com)
USB-Console	Service-Interface USB 2.0 plug B (driver: see www.bintec-elmeg.com)

Hardware

Status LEDs	Power, Status, 10 * Ethernet, VDSL, USB
Realtime clock	System time persists even at power failure for some hours.
Wall mounting	Integrated in housing
Desktop operation	Possible, rubber pad included the package
Environment	Temperature range: Operational 0°C to 40°C; storage -25°C to 70°C; Max. rel. humidity 10 - 95% (non condensing)
Protection Class	IP20
Power supply	Internal power supply 110-240V 1.5 A, with energy efficient switching controler; complies with EuP directive 2008/28/EC
Power consumption (idling)	Less than 5 Watt
Housing	Metal case, opening for Kensington lock, prepared for wall mounting
Dimension	Ca. 265 mm x 40 mm x 170 mm (W x H x D)
Fan	Fanless design therefor high MTBF
Reset button	Restart or reset to factory state possible
Function Button	Supported from Release 9.1.10
Standards and certifications	R&TTE directive 1999/5/EG; EN 55022; EN 55024 + EN 55024/A1; EN61000-3-2; EN 61000-3-3; EN 61000-4-4; EN 60950-1; EN 300 328; EN 301 489-17; EN 301 489-1; EN 301 893

Content of Delivery

Installation Poster	Guide for the Installation
19" brackets and screws	Two 19" brackets for the switch panel mounting
Ethernet cable	1 Ethernet cable, 2m
Safety Instructions	Safety Instructions
Power cable	Power Plug 100-240V / 1,5 A
VDSL/ADSL cable	VDSL/ADSL cable (RJ45-RJ11), 3m

Service

Service	
Software Update	Free-of-charge software updates for system software (BOSS) and management software (DIME Manager)
Warranty	2 year manufacturer warranty inclusive advanced replacement

VPN	
Number of VPN tunnels	Inclusive 5 active VPN tunnels with the protocols IPSec, PPTP, L2TP and GRE v.0 (also in combination possible)
PPTP (PAC/PNS)	Point to Point Tunneling Protocol for establishing fo Virtual Privat Networks, inclusive strong encryption methods with 128 Bit (MPPE) up to 168 Bit (DES/3DES, Blowfish)
GRE v.0	Generic Routing Encapsulation V.0 according RFC 2784 for common encapsulation
L2TP	Layer 2 tunnelling protocol inclusive PPP user authentication
IPSec	Internet Protocol Security establishing of VPN connections
IPSec Algorithms	DES (64 Bit), 3DES (192 Bit), AES (128,192,256 Bit), CAST (128 Bit), Blowfish (128-448 Bit), Twofish (256 Bit); MD-5, SHA-1, RipeMD160, Tiger192 Hashes
IPSec hardware acceleration	Integrated hardware acceleration for IPSec encryption algorithms DES, 3DES, AES
IPSec IKE	IPSec key exchange via preshared keys or certificates
IPSec IKE Config Mode	IKE Config Mode server enables dynamic assignment of IP addresses from the address pool of the company. IKE Config Mode client enables the router, to get assigned dynamically an IP address.
IPSec IKE XAUTH (Client/Server)	Internet Key Exchange protocol Extended Authenticaion client for login to XAUTH server and XAUTH server for loging of XAUTH clients
IPSec IKE XAUTH (Client/Server)	Inclusive the forwarding to a RADIUS-OTP (One Time Password) server (supported OTP solutions see www.bintec-elmeg.com).
IPSec NAT-T	Support of NAT-Traversal (Nat-T) for the application at VPN lines with NAT
IPSec IPComp	IPSec IPComp data compression for higher data throughput via LZS
IPSec certificates (PKI)	Support of X.509 multi-level certificates compatible to Micrososft and Open SSL CA server; upload of PKCS#7/8/10/12 files via TFTP, HTTP, HTTP, LDAP, file upload and manual via FCI
IPSec SCEP	Certificates management via SCEP (Simple Certificate Enrollment Protocol)
IPSec Certificate Revocation Lists (CRL)	Support of remote CRLs on a server via LDAP or local CRLs
IPSec Dead Peer Detection (DPD)	Continuous control of IPSec connection
IPSec dynamic IP via ISDN	Transmission of dynamic IP address in ISDN D or B channel; free-of-charge licence necessary
IPSec dynamic DNS	Enables the registering of dynamic IP addresses by a dynamic DNS provider for establishing a IPSec connection.
IPSec RADIUS	Authentication of IPSec connections at a RADIUS server. Additionally the IPSec peers, which were configured on a RADIUS server, can be loaded into the gateway (RADIUS dialout).
IPSec Multi User	Enables the Dial-in of several IPSec clients via a single IPSec peer configuration entry
IPSec QoS	The possibility to operate Quality of Service (traffic shaping) inside of an IPSec tunnel

VPN

IPSec NAT	By activating of NAT on an IPSec connection it is possible, to implement several remote locations with identical local IP addess networks in different IP nets for the VPN connection
Number of IPSec tunnels	Inclusive 5 active IPSec tunnels

Security

NAT/PAT	Symmetric Network and Port Address Translation (NAT/PAT) with randomly generated ports inclusive Multi NAT (1:1 translation of whole networks)
Policy based NAT/PAT	Network and Port Address Translation via different criteria like IP protocols, source/destination IP Address, source/destination port
Policy based NAT/PAT	For incoming and outgoing connections and for each interface variable configurable
Content Filtering	Optional ISS/Cobion Content filter (30 day test license inclusive)
Stateful Inspection Firewall	Packet filtering depending on the direction with controling and interpretation of each single connection status
Packet Filter	Filtering of IP packets according to different criteria like IP protocols, source/destination IP address, source/destination port, TOS/DSCP, layer 2 priority for each interface variable configurable

Logging / Monitoring / Reporting

Internal system logging	Syslog storage in RAM, display via web-based configuration user interface (http/https), filter for subsystem, level, message
External system logging	Syslog, several syslog server with different syslog level configurable
E-Mail alert	Automatic E-Mail alert by definable events
SNMP traps	SNMP traps (v1, v2, v3) configurable
IPSec monitoring	Display of IPSec tunnel and IPSec statistic; output via web-based configuration user interface (http/https)
Interfaces monitoring	Statistic information of all pysical and logical interfaces (ETH0, ETH1, SSIDx, ...), output via web-based configuration user interface (http/https)
IP accounting	Detailed IP accounting, source, destination, port, interface and packet/bytes counter, transmission also via syslog protocol to syslog server
RADIUS accounting	RADIUS accounting for PPP, PPTP, PPPoE and ISDN dialup connections
Keep Alive Monitoring	Control of hosts/connections via ICMP polling
Tracing	Traces can be stored in PCAP format, so that import to different open source trace tools (e.g. wireshark) is possible.
Tracing	Detailed traces can be done for different protocols e.g. ISDN, PPPoE, ... generation local on the device and remote via DIME Manager

Administration / Management

Administration / Management	
RADIUS	Central check of access authorization at one or several RADIUS server, RADIUS (PPP, IPSec inclusive X-Auth and login authentication)
RADIUS dialout	On a RADIUS server configured PPP und IPSec connection can be loaded into the gateway (RADIUS dialout).
TACACS+	Support of TACACS+ server for login authentication and for shell comando authorization
Time synchronization	The device system time can be obtained via ISDN and from a SNTP server (up to 3 time server configurable). The obtained time can also be transmitted per SNTP to SNTP clients.
Automatic Time Settings	Time zone profiles are configurable. That enables an automatic change from summer to winter time.
Supported management systems	DIME Manager, XAdmin
Configurable scheduler	Configuring of time and event controlled tasks, e.g. reboot device, activate/deactivate interface, activate/deactivate WLAN, trigger SW update and configuration backup
Configuration Interface (FCI)	Integrated web server for web-based configuration via HTTP or HTTPS (supporting self created certificates). This user interface is by most of bintec elmeg GmbH products identical.
Software update	Software updates are free of charge; update via local files, HTTP, TFTP or via direct access to the bintec elmeg web server
Remote maintenance	Remote maintenance via telnet, SSL, SSH, HTTP, HTTPS and SNMP (V1,V2,V3)
GSM remote maintenance	Remote maintenance via GSM login (external USB UMTS (3G) modem required)
Device discovery function	Device discovery via SNMP multicast.
On The Fly configuration	No reboot after reconfiguration required
SNMP	SNMP (v1, v2, v3), USM model, VACM views, SNMP traps (v1, v2, v3) configurable, SNMP IP access list configurable
SNMP configuration	Complete management with MIB-II, MIB 802.11, Enterprise MIB
Configuration export and import	Load and save configurations, optional encrypted; optional automatic control via scheduler
SSH login	Supports SSH V1.5 and SSH V2.0 for secure connections of terminal applications
HP OpenView	Integration into Network Node Manager
XAdmin	Support of XAdmin roll out and configuration managemant tool for larger router installations (IP+ISDN+GSM)
Configuration via USB	Configuration interface is available

Accessoires

WLAN Controller	
License WLAN Contr. 6AP (5500000943)	WLAN Controller license for 6 Access Points (APs) or for the extension with 6 APs for the products: RS123x, RS353xx. Rxxx2 and RXL12x00.

Software Licenses

VDSL License RS353ax (Annex A) (5500001622)	VDSL license for RS353a/aw (Annex A, ADSL over POTS)
BRRP-RS123x/RS35x-Series (5500001630)	Software License for bintec Router Redundancy Protocol (BRRP) for RS123x and RS35x-series
Cobion Content Filter Small (80551)	Cobion content filter for RSxxx, Rxx02, RTxx02 series; R230a(w), R232b(w), TR200, R1200(w/wu), R3000(w), R3400, R3800, R232aw, RV-Series; list price for one year

Pick-up Service / Warranty Extension

Service Package 'small' (5500000810)	Warranty extension of 3 years to a total of 5 years, including advanced replacement for bintec elmeg products of the category 'small'. Please find a detailed description as well as an overview of the categories on www.bintec-elmeg.com/servicepackages.

Product Services

HotSpotHosting 2yr 1 location (5500000861)	HotSpot solution hosting fee for 2 year and 1 location
HotSpotHosting 1yr 1 location (5510000198)	HotSpot solution hosting fee for 1 year and 1 location
Additional HotSpot location (5510000199)	Additional location for the HotSpot solution (551000198, 5500000861) valid for one year

Add-ons

bintec 4GE-LE (5530000119)	LTE (4G)/UMTS (3G) extension device for router; 1x Gbit Eth; Simcard slot; Wallmounting; PoE Injector inclusive